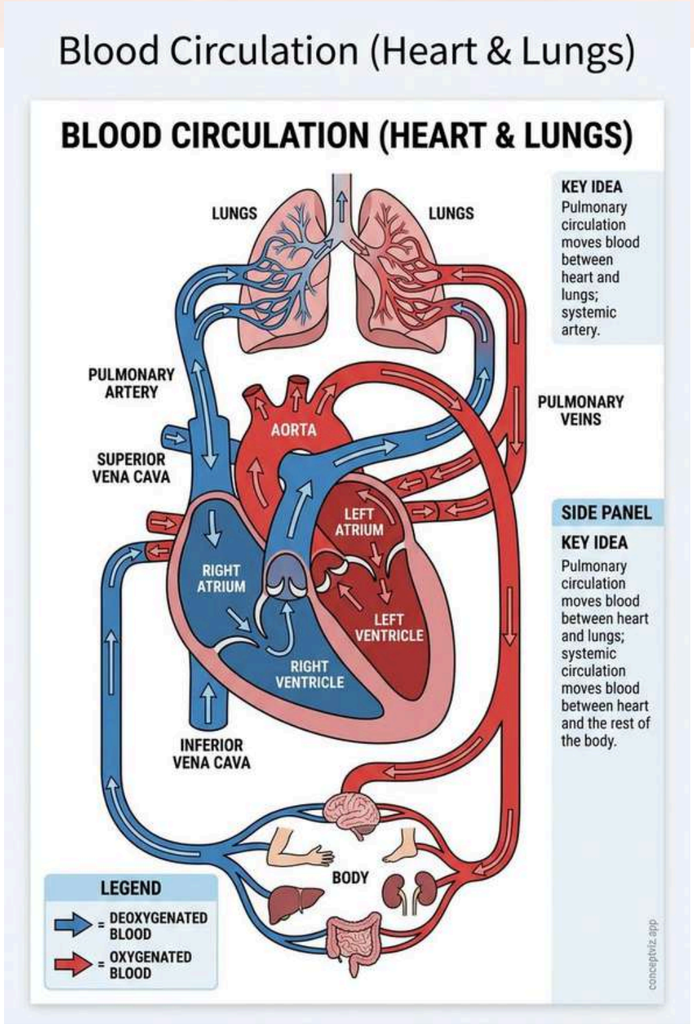
18-MAVZU:
QON AYLANISHING AHAMIYATI,YURAKNING TUZILISHI.

O’QITUVCHI: TESHAYEVA MOHINUR SAYFULLO QIZI

REJA:

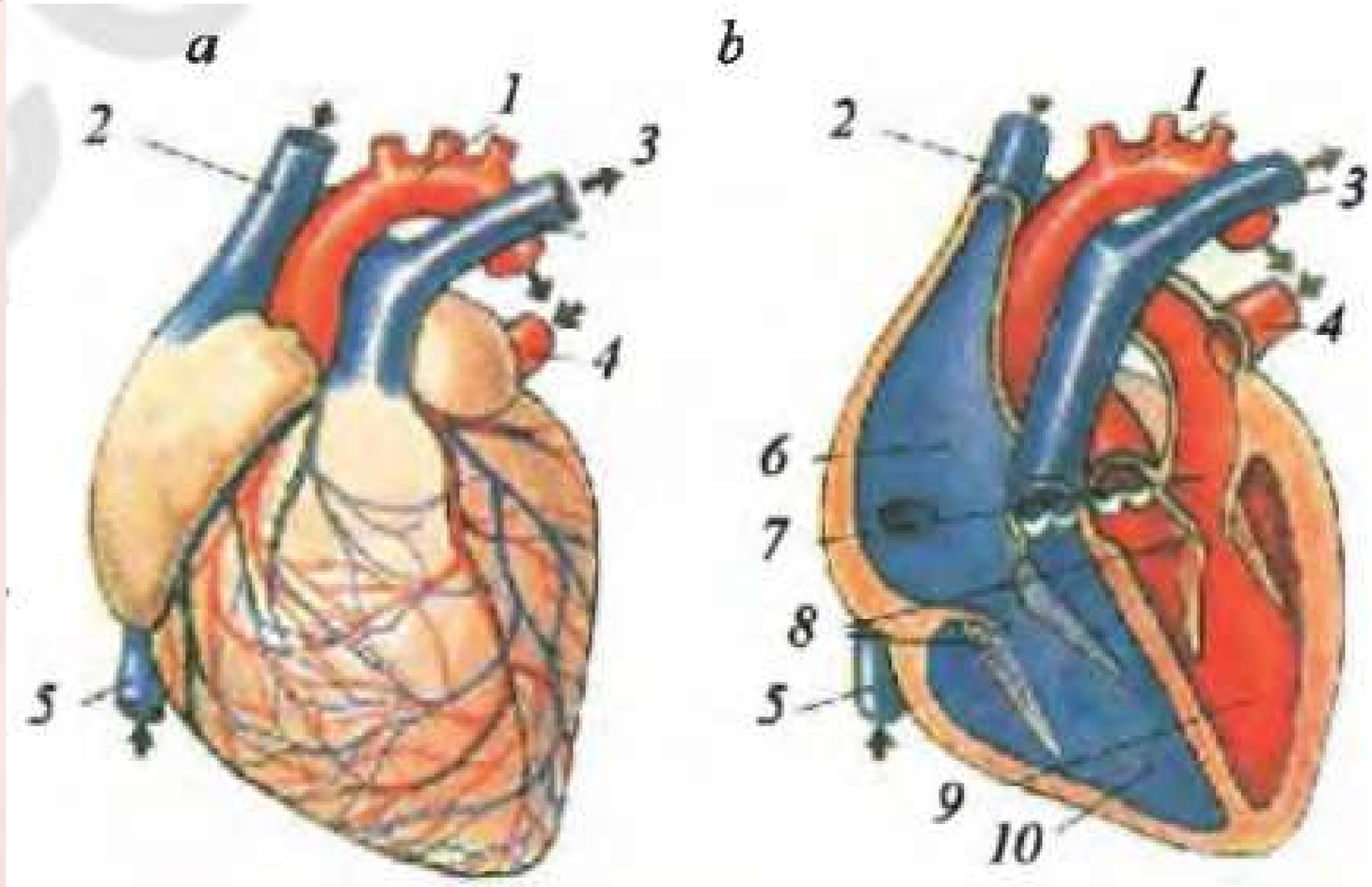
1.QON AYLANISHINING AHAMIYATI.
2.YURAKNING TUZILISHI.
3.YURAK AVTOMATIYASI.
4.YURAK SIKLI.
5.YURAK ISHINING NERV BOSHQARILISHI.
6.YURAK ISHINING GUMORAL BOSHQARILISHI.

QON AYLANISHINING AHAMIYATI. YURAK VA QON TOMIRLARI QON AYLANISH SISTEMASI ORGANLARI HISOBLANADI. YURAK MUSKULLARI QISQARIB, ORGANIZMDA QONNING TO'XTOVSIZ OQIB TURISHINI TA’MINLAYDI. QONNING TOMIRLAR BO‘YLAB OQIB TURISHI QON AYLANISHI DEYILADI. QON AYLANISHI TUFAYLI TO‘QIMA VA HUJAYRALARGA OZIQ MODDALAR VA KISLOROD TO'XTOVSIZ KELIB TURADI, MODDALAR ALMASHINUVI MAHSULOTLARI ORGANIZMDAN CHIQARIB TURILADI.

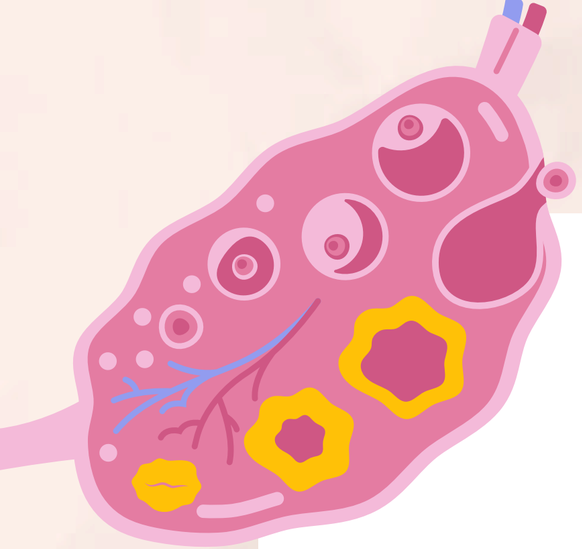


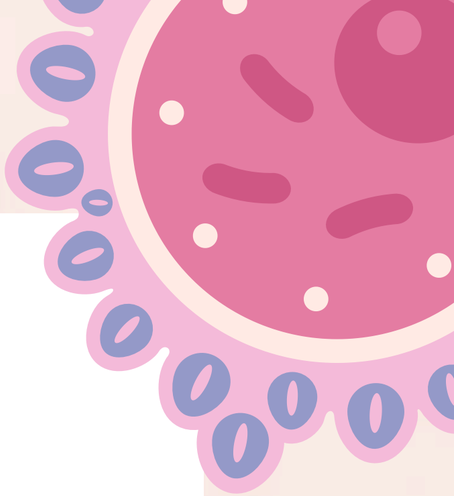
YURAKNING TUZILISHI. YURAK QON AYLANISH SISTEMASINING MARKAZIY ORGANI HISOBLANADI. YURAK XALTAGA O'XSHASH MUSKULLI ORGAN BO‘LIB, KO‘KRAK QAFASIDA, TO‘SH SUYAGI ORQASIDA JOYLASHGAN (33-RASM). UNING KO‘PROQ QISMI KO‘KRAK QAFASINING CHAP QISMIDA TURADI. YURAKNING KATTALIGI ODAM MUSHTIDEK KELADI. UNING MASSASI ERKAKLARDA 220-300 G, AYOLLARDA 180-220 G BO‘LADI.

YURAK NASOS SINGARI QONNI QON TOMIRLARIGA HAYDAB CHIQARADI. TINCH TURGAN ODAM YURAGINING YURAK QORINCHALARI BIR MARTA QISQARGANDA 65-70 ML QONNI AORTAGA CHIQARADI. BU YURAKNING SISTOLIK HAJMI DEB ATALADI. SISTOLIK HAJMNI BIR MINUTDAGI QISQARISHLAR SOMGA KO‘PAYTIRISIH ORQALI HAR BIR YURAK QORINCHASINING MINUTLIK SISTOLIK HAJMINI TOPISH MUMKIN, YA’NI MINUTLIK HAJMI O‘RTACHA TINCH HOLATDA 5 LITR (70X70 =4,9).

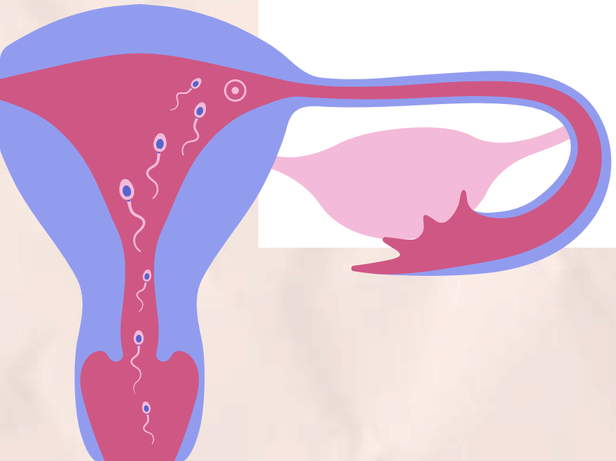


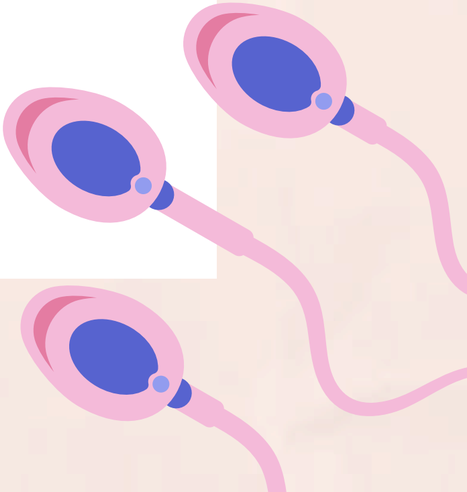
33-RASM. YURAKNING TUZILISHI:
A – TASHQI KO'RINISHI,
B – ICHKI
TUZILISHI: 1 – AORTA YOYI,
2 – YUQORI KOVAK VENA,
3 – O‘PKA ARTERIYASI,
4 – O‘PKA
VENASI, 5 – PASTKI KOVAK VENA,
6 – O‘NG BO‘LMASI, 7 – CHAP
BO'LMASI, 8 – TAVAQALI KLAPANLAR, 9 – CHAP QORINCHA,
10 – O‘NG QORINCHA.

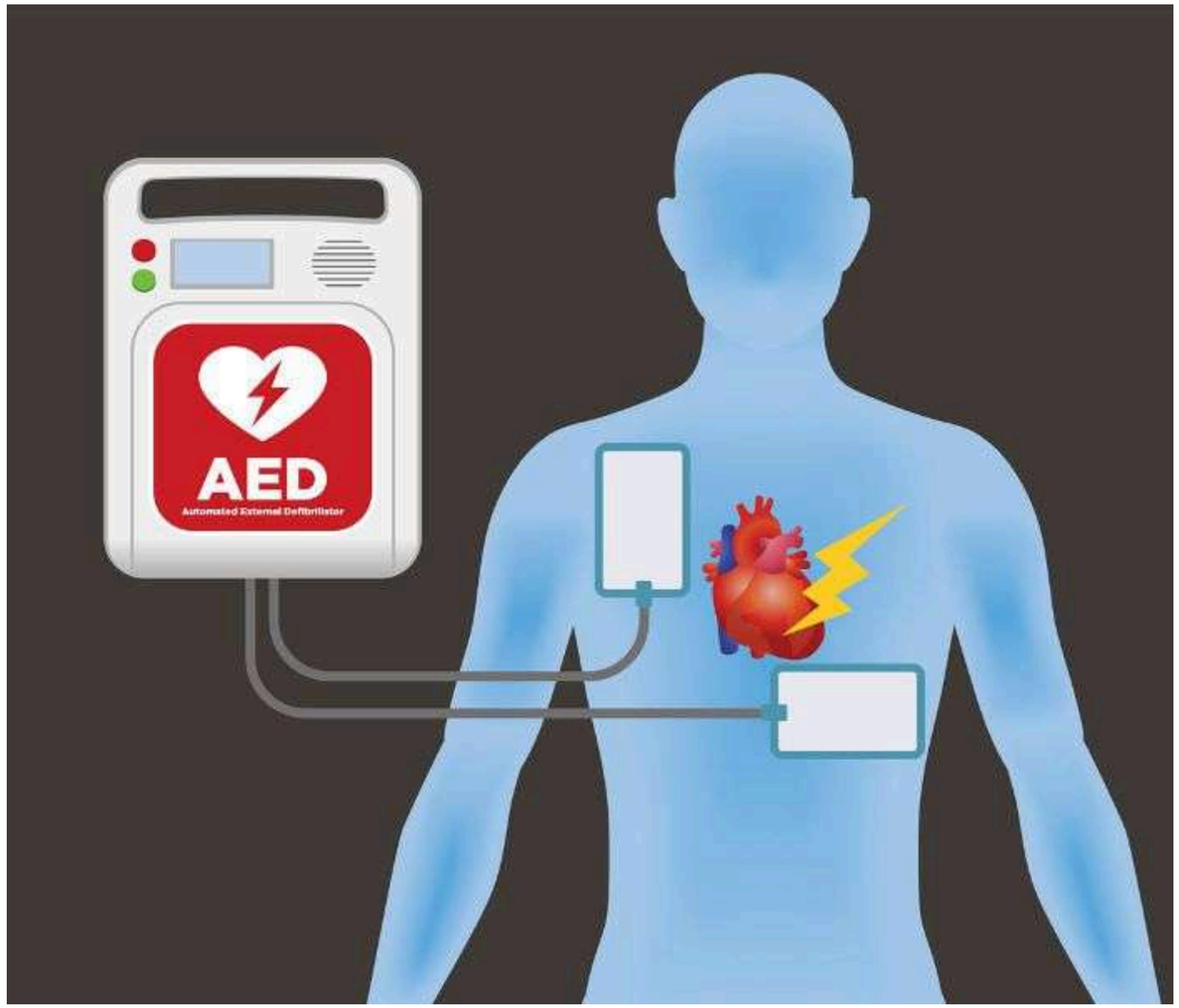


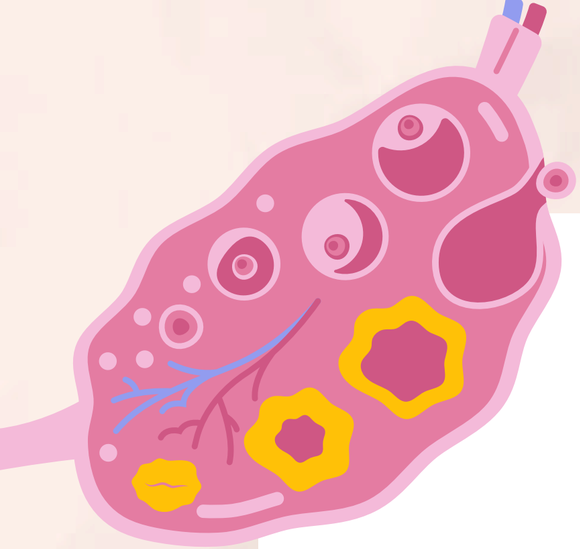


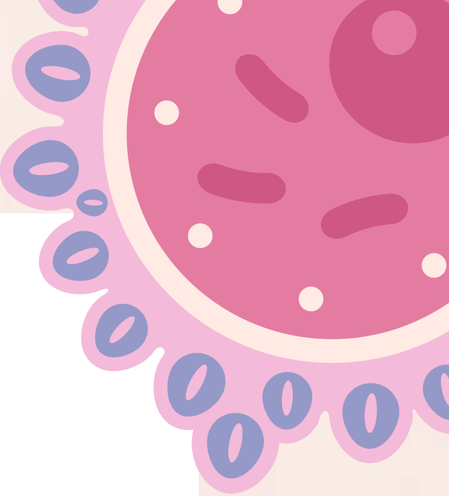
YURAK AVTOMATIYASI. TINCH HOLATDA YURAK 1 MINUTDA 70 MARTA QISQARADI.
YURAK BIR KECHA-KUNDUZDA 100000 MARTA QISQARIB, 10 TONNAGA YAQIN QONNI QON TOMIRLARIGA CHIQARADI. YURAK TANADAN AJRATILGANDA HAM MA’LUM VAQT DAVOMIDA QISQARIB TURADI, BU XUSUSIYAT YURAK MUSKULLARIDA JOYLASHGAN MAXSUS HUJAYRALARDA PAYDO BO‘LIB TURADIGAN QO‘ZG‘ALISHLAR BILAN BOG‘LIQ. YURAKNING O‘Z MUSKULLARIDA PAYDO BOMADIGAN QO‘ZG‘ALISHLAR TA’SIRIDA BIR ME’YORDA QISQARISH XUSUSIYATI YURAK AVTOMATIYASI DEYILADI.



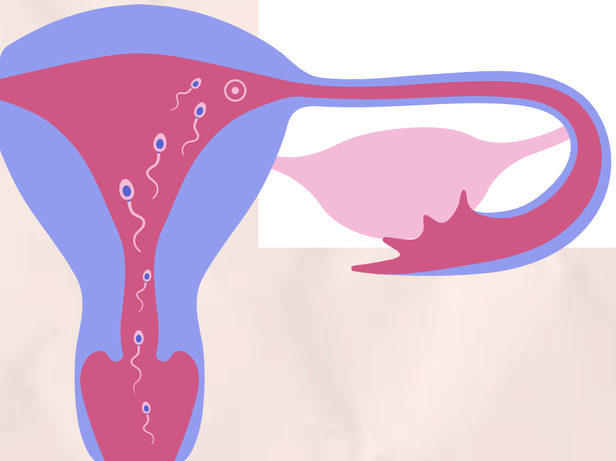


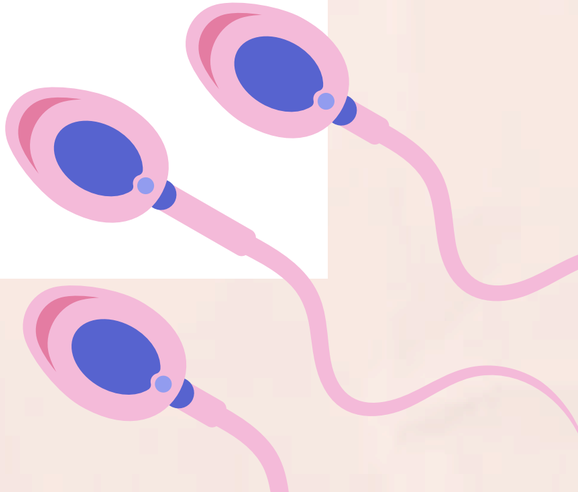

AED
Automated External Defibrillator





YURAK SIKLI. YURAK BO‘LMALARI VA QORINCHALAR NAVBAT BILAN QISQARADI. YURAK BO‘LMALARI VA QORINCHALARINING BIR MARTADAN QISQARIB, BO‘SHASHI YURAK SIKLI DEYILADI. YURAK BO‘LMALARINING QISQARISHI 0,1 SEKUND DAVOM ETADI; QON BO‘LMALARDAN QORIN CHALARGA CHIQARILADI. SHUNDAN SO‘NG CHAP VA O‘NG QORINCHALAR 0,3 SEKUND DAVOMIDA QISQARIB, TOMIRLARGA QON CHIQARILADI. KEYIN BO‘LMACHALAR VA QORINCHALAR MUSKULLARI 0,4 SEKUND DAVOMIDA BO'SHASHIB, DAM OLADI. SHUNDAY QILIB, YURAK SIKLI O'RTACHA 0,8 SEKUND DAVOM ETADI.





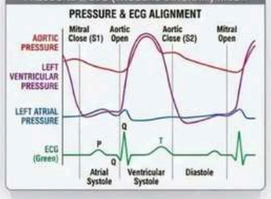
'THE CARDIAC CYCLE:
ATRIAL SYSTOLE, VENTRICULAR SYSTOLE, & DIASTOLE
– PRESSURE, FLOW, & VALVE DYNAMICS'

WHAT IS THE CARDIAC CYCLE?
- One complete heartbeat
- Filling phase + pumping phase
- Coordinated electrical & mechanical activity

VOLUME CHANGES

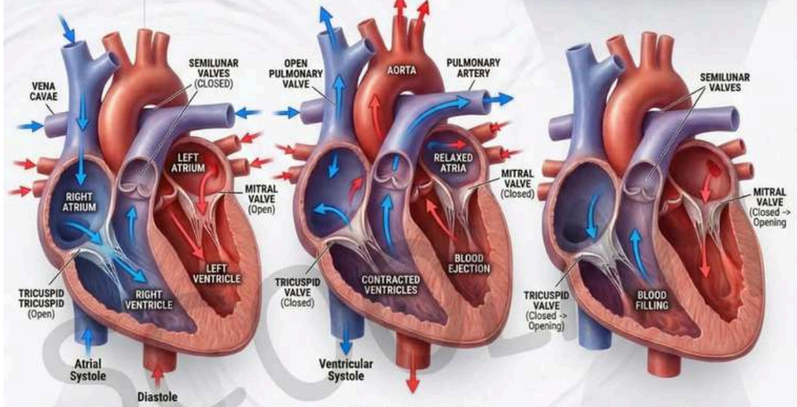
Phase	Ventricular Volume
End-Diastole	Maximum (EDV)
End-Systole	Minimum (ESV)

PRESSURE & ECG (WIGGERS DIAGRAM) INSET.



DIASTOLE (Filling Phase)
- Ventricles relax
- AV valves open
- Blood fills ventricles

SYSTOLE (Pumping Phase)
- Ventricles contract
- Semilunar valves open
- Blood ejected to arteries



DIASTOLE (Filling Phase) **& ATRIAL SYSTOLE**

VENTRICULAR SYSTOLE (Pumping Phase)

DIASTOLE (Early Filling)

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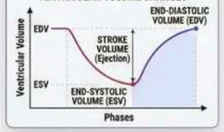
VOLUME CHANGES INSET.



CLINICAL RELEVANCE
- Heart failure
- Valve disorders
- Hypertension
- Arrhythmias
- Murmurs

BIOLOGICAL IMPORTANCE
- Maintains circulation
- Ensures oxygen delivery
- Connects electrical impulse to mechanical force
- Maintains systemic pressure

HEART SOUNDS & VALVE TIMING INSET.

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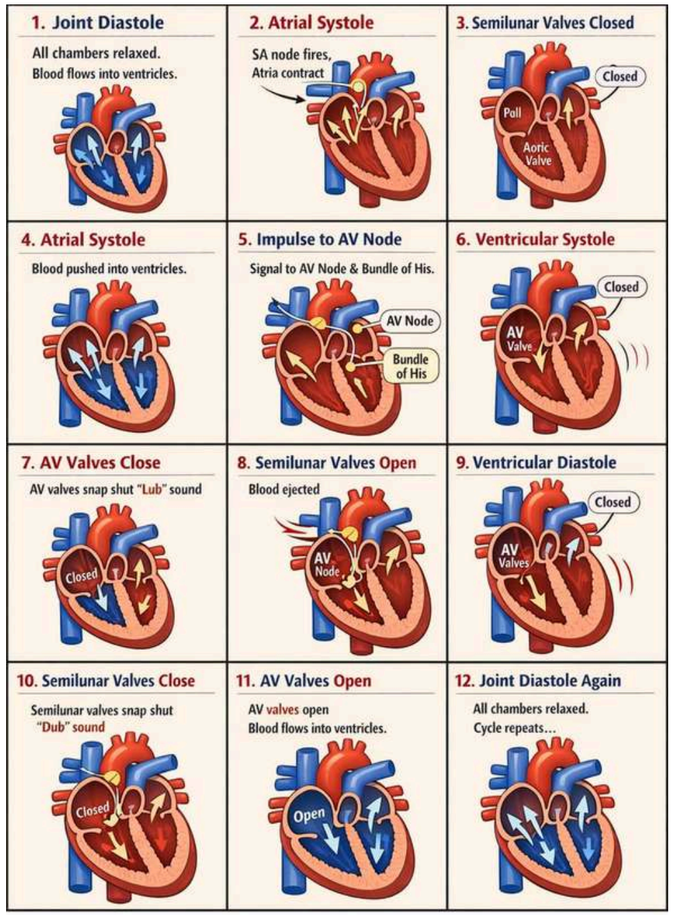

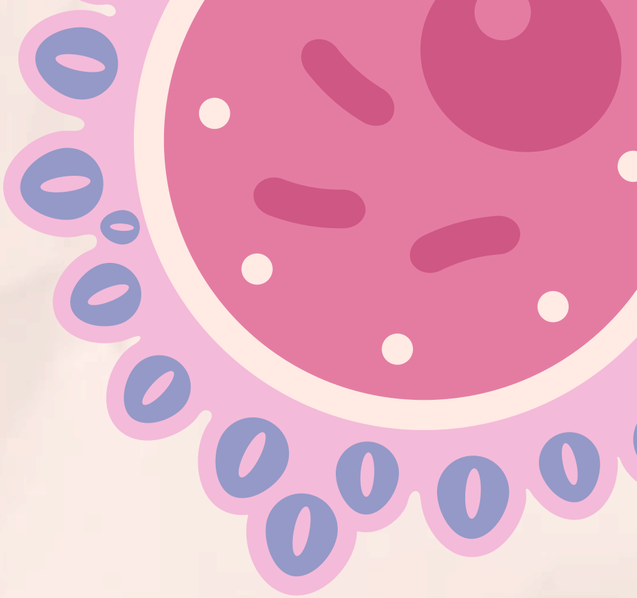

E’TIBORINGIZ UCHUN RAHMAT!